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**FINAL REPORT**

**ADDITION TO RECORD BUILDING**

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**I. INTRODUCTION**

- 1.01 Authorization: a. Procurement Authorization: The procurement of an addition to the existing Records Storage Building at

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[redacted] is based upon the Federal Records Act (Public Law 754) which requires the head of each Federal Agency to establish and maintain an active and continuing program for the economical and efficient management of the records of their records.

b. A&E Authorization: By the Project Review Committee Action signed on 18 June 1956 for \$17,200, approval was given to procure an Architect-Engineering contract to develop contract drawings and specifications for the construction of the Addition to the Storage Building.

c. Construction Authorization: The construction of this addition to the existing Records Storage Building was authorized by the Project Review Committee (Action No. DRS-237-57) and signed by the DCI on 17 May 1957. The authorization was for a total expenditure of [redacted] FY 1957 vouchered funds. Of the authorized amount, [redacted] was for construction and [redacted] for equipment.

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- 1.02 Purpose and Scope: This report is presented to give a brief description of the contract, and a detail description of the construction work.

**II. DESIGN**

- 2.01 Plans and Specifications: The plans and specifications for the construction of the Addition to the Record Storage Building were prepared by [redacted]

[redacted], and approved by the Chief of the Engineering Branch of the Office of Real Estate and Construction Division. Detailed shop and manufacturers' drawings were compiled

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to supplement the contract plans and aid the contractor's forces in properly interpreting them. The contract drawings, one to six inclusive, architectural drawings, S-1 to S-4 inclusive, structural drawings, N-1 to N-3 inclusive, Mechanical drawings, E-1 to E-3 inclusive, and Electrical drawings, all dated 14 January 1957, are marked, Addition to Storage Building at [REDACTED] 25X1

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[REDACTED] A complete set of as-built contract and supplemental drawings and specifications, pertinent to them, are on file at the [REDACTED] 25X1

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- 2.02 General Design: The new structure is an addition located against the original Storage Building on its southeast side. The addition has two full 14' high, 80' x 142' stories and a basement area of 80' x 70'. It has concrete foundations, concrete bell top columns, and flat slab construction. The exterior walls are concrete masonry units double-wall-type construction. Such walls are stuccoed on the outside and marker off in panels to match the existing building. The new addition includes utilities, air conditioning, humidification, burglar and fire alarm systems, and an electrical system. The major part of the mechanical equipment in the existing mechanical equipment room was relocated in the new mechanical equipment room of the new addition.

### III. CONTRACT

- 3.01 Award: The construction Contract No. [REDACTED] was awarded on 27 June 1957 to [REDACTED] 25X1
- [REDACTED], the low bidder. The bid price was [REDACTED]. The time required for construction was 230 calendar days. The contractor received notice to proceed with the construction on 1 July 1957 which set the completion date on 12 February 1958. The date of acceptance was 25 June 1958.

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- 3.02 Items of Contract: The work performed under this contract consisted of the construction of a two-story reinforced concrete frame structure having 12" concrete block curtain walls comprising approximately [REDACTED] cubic feet of interior space, complete with mechanical equipment, including air conditioning.

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- 3.03 Change Orders: During the progress of construction, modifications to the plans and specifications became necessary. These modifications resulted in the issuing of six Change Orders as follows:

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a. Change Order No. 1: This Change Order included four modifications to the contract:

- (1) Use of 110' linear feet of 6" cast iron pipe in lieu of 6" T.C. pipe for the sanitary sewer line. Cost of this item was \$437.62.
- (2) Extend the 18" concrete culvert 100 linear feet. Removal of two trees and the installation of a 4' high tree wall. Cost of this item was \$905.26.
- (3) Rock excavation encountered in the trenching for water and sewer lines. Cost of this item was \$572.69.
- (4) Rock excavation encountered in the building foundation. Cost of this item was \$3,710.27.

The above noted modifications in this Change Order resulted in an increased contract cost of \$5,625.84. The completion date of the contract was extended nine days making a new total of 239 calendar days.

b. Change Order No. 2: This Change Order included four modifications to the contract:

- (1) The installation of a temporary fuel oil system which was not shown on the plans or specifications.
- (2) Removal of rock encountered in the building foundation. Cost of this item was \$3,124.34.
- (3) The construction of a re-enforced concrete grade beam in lieu of stepping the footing along the southeast foundation wall. There was no cost increase to the contract for this item.
- (4) Construct the columns, D-1, D-2, D-3, and D-4, 24" square, in lieu of 22" round, from top of footing to underside of the slab on grade. This was approved at the contractor's request. There was no cost increase to the contract for this item.

Change Order No. 2 increased the contract price by \$3,438.86 and extended the contract completion date twenty-one (21) calendar days making a new total of 260 calendar days. With this extension of time, the new completion date was set at 17 March 1958.

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c. Change Order No. 3: This Change Order resulted from a change in the switchboard as called for on revised Drawing No. E-2-1, dated 5 July 1957. Cost of this item was \$656.59.

d. Change Order No. 4: There were seven modifications included in this Change Order as follows:

(1) Clearing trees and relocation of water and sewer lines. Cost of this item was \$190.77.

(2) Substitute Group C Tile (green) for the specified Group B Tile (black) in all areas except the new office and the basement storage room. Cost of this item was \$963.15.

(3) Removal of rock encountered in the excavation for sanitary sewer. Cost of this item was \$194.33.

(4) Removal of approximately 25 cubic yards of shale from the excavation for the fuel oil tank. Cost of this item was \$477.63.

(5) Changes to convert the second floor of the building into temporary warehousing area. This change reduced the contract cost of the building by \$1,806.47.

(6) The purpose of this modification was to paint the exterior of both the new and existing portions of the building a dark green color. Both the [ ] and the [ ] have indicated their strong preference for this color in lieu of the existing yellow and requested this change. This change increased the contract cost by \$2,340.36.

(7) The designed transformer pad shown on the plan proved to be inadequate and the pad had to be enlarged. This increased the contract cost by \$1,086.42. Change Order No.

4 increased the contract by  
Change Order No. 4 increased the contract by \$3,416.19 and extended the completion date by nine and one-half ( $9\frac{1}{2}$ ) days to a total of 269 $\frac{1}{2}$  days.

e. Change Order No. 5: Disagreement between the Government and the contractor over who should furnish and install a burglar alarm system in this building was solved by interpretation of the specifications that the contractor was responsible for all labor involved in the installation of the system and any material cost would be the responsibility of the Government. This change increased the contract cost by \$4,611.42 and extended the completion date by thirty-four (34) calendar days.

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f. Change Order No. 6: There were fifteen small deductions and additions to the contract which covered the adjustment for final settlement of the contract. They are as follows:

	Deduct.	Add
Relocation of Electrical Cables		\$ 238.91
Additional cinder block walls		100.00
Addition of a 2½" check valve		73.45
Conc. pad installation in M.E. room		25.00
10" corrugated culvert installation		42.40
Lunchroom window protection		
omission	\$114.82	
Omission of siren	350.00	
Moving of 6" water main		666.69
Rock excavation for 8" storm sewer		384.05
Valve box credits	35.00	
Credit on cleaning shelves, etc.	100.00	
Swivel joints - omission	50.00	
Swivel hangers - omission	200.00	
Supports for bin lights - omission	30.00	
Three heat detectors		22.54
		<hr/>
Totals	\$879.82	\$1,553.04
		<hr/> 879.82
Net amount of Change Order No. 6 to be added to Contract		\$ 673.22

3.04 Labor Regulations: The men employed on this contract were paid in accordance with the wage rates issued by the Secretary of Labor. The eight-hour law and overtime compensation were enforced on this contract.

3.05 Cost of Project: The total cost of construction under this contract exclusive of the Government supervision and inspection was

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#### IV. CONSTRUCTION

4.01 Equipment: The equipment used during the construction of the Addition to the Storage Building was as follows:

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## a. Earthworking equipment:

Two D8 Tractors  
Two Letourneau scrapers  
One Back hoe  
One Sheepsfoot roller  
One D5 Bulldozer  
One Power Patrol Grader  
One Air compressor  
Two Airdrills  
Three Dump trucks  
Three Pneumatic tampers

## b. Concrete Equipment:

Eight Concrete buggies  
Two Vibrators  
Two Concrete Finishers

4.02 Excavation: The limits for the stripping for the Storage Building were established by toe stakes. Structural excavation for the building foundation, water lines, and sewers was removed to the elevations shown on the plans. In the excavation for the building, rock was encountered which required drilling and blasting until the required elevations were met.

4.03 Foundation Preparation:

a. The topsoil over the building foundation was excavated with D8 caterpillar tractor and Letourneau scraper. The topsoil was stored for use over the finished grade.

b. The structural excavation for the building was accomplished with scrapers, back hoe, and trucks and used to fill in an area adjacent to the power house. The open cut method for the excavation of the building was used, sides were sloped so that they stood without shoring.

4.04 Drainage: The drainage system was constructed as indicated on the plans.

4.05 Backfill: Backfill along the building walls was placed in 4-inch layers and compacted with pneumatic tampers, clay material was used for backfill.

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- 4.06 Seeding: After the final grading and topsoiling was completed, 1,000 lbs. of a grade 10-6-4 commercial fertilizer and 2,000 lbs. of lime containing approximately 80 per cent calcium carbonate were spread per acre. The area was then disced and cross-disced to a minimum of three inches and then harrowed. The grass seed was sown at 100 lbs. per acre (40 lbs. Bermuda grass and 60 lbs. rye grass). The area was hand-raked to remove all stones and rolled with an approved roller.
- 4.07 Concrete: Portland cement was used for the construction of the Storage Building. The concrete was designed for a minimum 3,000 p.s.i. compression test at age of 28 days. Aggregate for the concrete was in accordance with ASTM-C-33 specifications.
- 4.08 Forms: Forms for the construction of the Storage Building were built of No. 2 T&G common lumber and 3/4" plywood. The forms were treated with a form coating applied in accordance with the manufacturer's directions. Form ties were of the pull-through type.
- 4.09 Concrete Placing: Ready mixed concrete was delivered to the site in mixer trucks. After the forms were checked, cleaned, and inspected, the concrete was dumped directly from the truck mixer into concrete buggies; the buggies then being pushed up ramp to the forms. Each basket of concrete was vibrated into place by gas driven vibrators. Vibration was supplemented by spading and forking along the surface of the forms. Hoppers were placed on top of the forms with detachable sections "elephant trunk" chutes to prevent segregation of the coarse aggregate. During the placing of concrete, the alignment of the forms and embedded metal was constantly checked with plumb bobs, chalk lines, and surveying instruments.
- 4.10 Concrete Finish: Immediately after placement, the concrete was forked back along the face of the forms and struck off by a board screen. The concrete was allowed to set until it was stiff enough to prevent the final floating from bringing up any water. The surface was then finished with gas driven finishing machines and steel towels to produce a smooth surface.
- 4.11 Concrete Curing: Upon completion of the concrete finishing, a coat of curing compound was applied by a spray at the rate of one gallon to 200 square feet. After the forms were removed, the holes left in the concrete by the removal of form rods were filled with mortar. Curing compound was then sprayed on the concrete surface.

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- 4.12 Concrete test: The compressive strength of the concrete was tested by breaking cylinders made from representative samples of the concrete. The number of cylinders tested and their breaking strength are on file in the RECD/OL.
- 4.13 Re-enforcing: The re-enforcing steel was delivered to the site in lengths and shapes as designated on the plans. The steel was cleaned and placed in the forms according to the plans.
- 4.14 Masonry Work: This work was performed as indicated on the plans and in compliance with Federal Specifications No. SS-C-621, except that the use of cinders as aggregate was not permitted. Work was built level, square, plumb, and true; joints were uniform in thickness and trowelled neatly.
- 4.15 Metallic Water-Proofing: This work was applied in the locations indicated on the drawings. The surface of the concrete that was to be waterproofed was thoroughly cleaned and all high spots removed. The cleaned surface was thoroughly wet and the water-proofing material applied by brush so as to seal all pores. Three coats of waterproofing material were applied allowing sufficient time between each coat to permit oxidation of the material. Surfaces treated with waterproofing were given one brush coat of grout and two coats of plaster were applied over the protective brush coat before the grout had set.
- 4.16 Ornamental Metal: This metal was installed as indicated on the plans. Shop drawings were submitted as required and are on file at  25X1
- 4.17 Metal Specialities: Metal specialities were installed as indicated on the plans. Shop drawings are on file at  25X1
- 4.18 Metal Doors and Frames: Doors were installed as indicated on the plans. Shop drawings are on file at  25X1
- 4.19 Roofing and Sheet Metal: A built-up roof on perlite fill which in turn was placed over an 8 inch concrete slab was laid in accordance with manufacturer's specifications. A manufacturer's surety Bond Guarantee for 20 years, from date of completion, was furnished by the Contractor.

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a. Gravel stops were formed from 16 oz. cold rolled copper in length not exceeding 8 feet.

b. Gutters were formed from 20 oz. cold rolled copper in 8 ft. to 10 ft. sections.

c. Downspouts were corrugated 3" x 4", formed from 16 oz. cold rolled copper. Gravel stops, gutters, and downspouts were installed in accordance with plans and specifications.

- 4.20 Resilient Floors: Asphalt tile was installed where indicated on the drawings. Tile was cleaned, waxed, and polished in accordance with manufacturer's recommended maintenance methods.
- 4.21 Painting: The painting was completed in accordance with the specifications. All paint used was in accordance with Federal Specifications.
- 4.22 Stucco: Stucco was applied to exterior concrete and concrete masonry in three applications. The base was evenly dampened before each coat of stucco was applied. Stucco has a smooth trowel finish, scored as indicated on the drawings.
- 4.23 Heating and Air Conditioning: Automatic heating and air conditioning equipment was installed in accordance with the drawings and specifications. The installation of this equipment was under the inspection of the mechanical engineer from RECD/OL. After installation, this equipment was tested and necessary adjustments made. Shop drawings were submitted and approved on all equipment installed and are on file in the Office of the Post Engineer,
- 4.24. Electrical: The electrical installation was in accordance with the drawings and specifications. The installation complied with the applicable rules of the National Electrical Code. All electrical material was approved by the Underwriters' Laboratories, Inc. Tests of the complete wiring system were made and the equipment operated in accordance with the requirements of the specifications.
- 4.25 Plumbing: All plumbing under this contract was installed in accordance with drawings, specifications, and latest edition of the National Plumbing Code. The material used was approved by the Contracting Officer.

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- 4.26 Alarm System: The building is equipped with both automatic fire and burglar alarm systems. The burglar alarm system (ADT) is intergrated with the existing alarm system on the station. The automatic fire alarm system is a combination fixed-temperature and rate-of-rise type. This system is integrated with the existing fire alarm system on the station.

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